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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/894,870	06/28/2001	Chalmers M. Butler	CXU-339	3691
22827	7590	08/02/2005	EXAMINER	
DORITY & MANNING, P.A. POST OFFICE BOX 1449 GREENVILLE, SC 29602-1449			THANGAVELU, KANDASAMY	
			ART UNIT	PAPER NUMBER
			2123	

DATE MAILED: 08/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/894,870	BUTLER ET AL.	
	Examiner	Art Unit	
	Kandasamy Thangavelu	2123	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 23 May 2005.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-21 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 23 May 2005 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____

DETAILED ACTION

1. This communication is in response to the Applicants' amendment and response mailed on May 23, 2005. This office action is Notice of non-responsive amendment to the Office action mailed on December 23, 2004.

Notice of non-responsive amendment

2. The reply filed on May 23, 2005 is not fully responsive to the prior Office Action because of the following omission(s) or matter(s): See 37 CFR 1.111. Since the above-mentioned reply appears to be *bona fide*, applicant is given **ONE (1) MONTH or THIRTY (30) DAYS** from the mailing date of this notice, whichever is longer, within which to supply the omission or correction in order to avoid abandonment.

EXTENSIONS OF THIS TIME PERIOD MAY BE GRANTED UNDER 37 CFR 1.136(a).

2.1 The applicants' amendment and response states on Page 2 of the amendment that a new set of drawings for the subject application is submitted as Appendix A; a clean version of the substitute specification is submitted as Appendix B; a copy of the previous specification with markings showing all changes relative to the immediate prior version of the specification is provided as Appendix C.

The amendment **does not provide clear instructions to the Legal Instruments examiner (LIE) as to how to incorporate the new material provided in** the original application. In particular, the references to Appendix A, Appendix B and Appendix C should be deleted and a cover sheet provided for each part stating respectively:

- Please replace Pages 1 to 186 of the original specification with the substitute specification appearing on Pages 1 to 51 following this page.
- Please replace sheets 1 to 29 of the original drawings with the substitute drawings appearing on Sheets 1 to 41 following this page.
- Please replace the original abstract with the abstract appearing following this page.

The new abstract is now buried in Appendix B.

2.2 The applicants have prepared the substitute specification using the original specification and following the format required, as indicated in the relevant MPEP paragraphs. However, the specification has numerous errors and deficiencies that the Examiner considers **the specification unacceptable** for a patent application and further processing of the application.

1. The background section appearing on Page 1 (there are two pages numbered 1) is not readable. The examiner cannot understand the words which employ,

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which have, operated over, in its, have omnidirectional, structures are, additional investigations and bandwidth requirement.

2. The Brief summary of the invention is **neither brief nor it deals with the invention proper**. It describes the invention on Page 2, but then includes a lot of background material on pages 3-6, before adding some more summary of the invention. The applicants have not really bothered to separate the background material from the summary of the invention, but rather simply have copied the original material and inserted the headings of "background of the invention" and "brief summary of the invention" at some random places.

3. The description for Fig. 2C is incorrect. There is no description for Fig. 2D. The description for Fig. 4C is incorrect. There is no description for Fig. 4D.

4. On Page 16, Fig. 7A is described before Figs. 5A and 5B description on Page 17. The figures shall be numbered in the order in which they are referenced in the specification.

5. The detailed description of the preferred embodiments has reference to various **prior art material** in almost all pages. These references shall appear only in the background of the invention (background material) and not in the description of the preferred embodiments. All such references in the description of the preferred

embodiment shall be deleted. All the reference material shall be included in the Information disclosure statements and copies of the non patent literature shall be provided.

6. The description appearing under the heading "An efficient curved-wire integral equation solution technique" from Page 22 to Page 46 of the substitute specification is written in the format of a paper for a conference or publication and not in the format of a patent application. The numerous subtitles used in that section such as **introduction, conclusions, references** are not applicable to a patent application. Numbering the subtitles only in this section is inconsistent with the remaining part of the description of the preferred embodiments. The **referencing of numerous prior art material** within the paper is followed in a conference paper to show the applicants' breadth of knowledge, but **very unacceptable in a patent application**. The applicants have simply inserted a conference paper in the patent application without really bothering to write this section in the format for the description of the preferred embodiments as required in a patent application. The applicants are required to rewrite this section following the format for description of the preferred embodiments. All references shall be removed from this section and placed as part of the background of the invention. A **list of references shall not be included within the specification**, but shall be part of the information disclosure statement.

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2.3 The application for a patent is now required to include paragraph numbers.

Therefore, the substitute application shall be prepared with paragraph numbers in the specification.

2.4 There are 41 sheets of Figures in the substitute specification. However, the sheets are not numbered. What will happen if a sheet containing Figs. 7C and 7D or a sheet containing Figs. 10C and 10D is dropped? All sheets of drawing shall be numbered using the format of: Sheet 1 of 41, Sheet 2 of 41 etc.

Conclusion

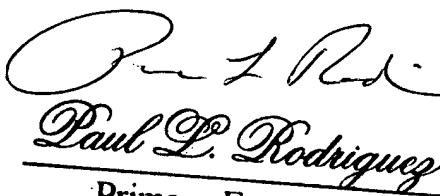
3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dr. Kandasamy Thangavelu whose telephone number is 571-272-3717. The examiner can normally be reached on Monday through Friday from 8:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo Picard, can be reached on 571-272-3749. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to TC 2100 Group receptionist: 571-272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

K. Thangavel
Art Unit 2123
July 26, 2005


Paul L. Rodriguez 7/27/05
Primary Examiner
Art Unit 2125